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AUTHOR Tierney, Robert J.; And Others
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ABSTRACT

To establish collaboration between theory and practice, between teaching and learning, and between researchers and teachers, a three-year project was initiated at Metcalf Laboratory School. Teachers were invited to explore reading comprehension and composition in their classrooms in a manner that supported unique teacher decision making and initiatives. Researchers helped teachers observe what they were doing, consider alternatives, and examine the potential of changes in practice. During the first year, researchers and teachers studied one of three topics: background knowledge, reading and writing relationships, and the role of discussion in reading instruction. In addition, teachers generated the equivalent of 15 mini-research projects ranging from the effects of different modes of discussion upon pupil involvement and the quality of their arguments to the effects of visualization experiences upon the reading of selected students in a low reading group. During the second year, each teacher chose to explore a single topic area in depth over the course of the year. The goal of the third year was to engage the teacher researchers in helping other teachers become teacher researchers. Based upon this experience, it is hoped the project can serve as a useful model for nurturing teacher change as well as translating reading and writing research into practice (and practice back into research). (HOD)

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CENTER FOR THE STUDY OF READING

Reading Education Report No. 56

THE METCALF PROJECT: A TEACHER-RESEARCHER COLLABORATION IN DEVELOPING READING AND WRITING INSTRUCTIONAL PROBLEM-SOLVING

Robert J. Tierney, David L. Tucker,
Margaret Gallagher, P. David Pearson,
and Avon Crismore

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University of Illinois
at Urbana-Champaign
51 Gerty Drive
Champaign, Illinois

Bolt Beranek and Newman Inc.
10 Moulton Street
Cambridge, Massachusetts 02238

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Abstract

The Metcalf Project was initiated in order to explore a different type of relationship between researchers and teachers, between theory and practice, and between teaching and learning. Our goal was to have teachers develop the view that "teaching was an ongoing experiment." This meant that teachers had to develop the confidence, willingness, and knowledge to explore pedagogical alternatives and to evaluate their relative effectiveness. Rather than be spoon-fed, we wanted to establish a situation wherein teachers were their own decision-makers. The present paper describes the project and the progress made toward those goals across the first two years of the project.

The Metcalf Project: A Teacher-Researcher Collaboration in Developing Reading and Writing Instructional Problem-Solving

The word "remote" might be used to describe the usual relationship between researchers and teachers, between theory and practice, and between teaching and learning. Researchers seem content to suggest principles of effective teaching, espouse new methods, or delineate the implications of theory for teaching and learning, while remaining quite separated from the everyday forces in operation in "the real world of a classroom." Researchers seem to prefer advising teachers from a distance. Teachers have a tendency to display similar predilections. They seem content to keep researchers at bay, and sometimes even maintain a distance between themselves and their own students. For example, teachers are likely to expend their energies negotiating with a set of curriculum objectives or a teacher's guide rather than refining their student-watching skills or adjusting their instruction to meet the idiosyncratic needs of students.

The Metcalf Project was initiated in order to explore a different type of relationship between researchers and teachers, between theory and practice, and between teaching and learning. The goal of the Metcalf Project has been to unite disparate factions in the education enterprise of teaching reading and writing. We wanted to establish a colloboration between

research, theory, and practice; between teaching and learning, as well as between researchers and teachers.

The beginnings of the Metcalf Project can be traced to a series of discussions held in the Spring of 1982 between staff at the Center for the Study of Reading at the University of Illinois at Urbana-Champaign (CSR), Illinois State University (ISU), and the Metcalf Laboratory School at ISU. David Tucker at ISU expressed interest in developing a working relationship with CSR that would be complementary to his already active role in staff and curriculum development at the Metcalf Laboratory School. He suggested that CSR staff might use Metcalf School as a site for applying some of their recent research findings. Staff of the Laboratory School were particularly interested in becoming more actively involved with the research community, in keeping with the stated mission of Metcalf as a laboratory school.

To the CSR staff the prospect of developing some sort of working relationship with the Metcalf-ISU staff was appealing. We were interested in working in a situation where there might be give and take between teachers and researchers. Rather than adopt a prescriptive approach (asking teachers to implement certain practices) or take over their classrooms to conduct a laboratory-like instructional study, we wanted Metcalf to be a site for a project on teacher change based upon a teacher-researcher collaboration. In consultation with all concerned parties, we decided to invite teachers to explore reading

comprehension and composition in their classrooms in a manner that supported unique teacher decision-making and initiatives. Researchers, we decided, would share ideas, but instead of pontificating or mandating change, they would help teachers observe what they were doing, consider alternatives, examine the potential of changes in practice. In so doing, teachers would develop an instructional repertoire based upon assessment of the effectiveness of different instructional practices; moreover, they would develop an appreciation for teaching and learning. In other words, we wanted to establish a partnership between researchers and practitioners. Teachers would not be spoon-fed; instead, they would make decisions based upon what they had gleaned from observations of their teaching and from their discussions with researchers. Researchers would expose teachers to new theory and research in reading comprehension and writing; but, as applications for the classroom emerged, researchers were expected to avoid offering direct advice. The researcher's role was to help support and refine teacher decision-making. The logical extension of this support role for researchers (consistent with the thesis that teaching should be an ongoing experiment) was the expectation that eventually the researchers would be displaced by the teachers themselves. As teachers became better problem-solvers, they would generate their own momentum for change and would in turn become the support personnel or partners for other teachers.

A Description of the Metcalf Project

As we write this chapter, the Metcalf Project is beginning its third year. Since its inception the goals of the Project have not changed, but its form has. From Year One to Year Two to Year Three the Project has pursued different activities to meet the changing needs and expanding skills of the teachers. In Year One, teachers reviewed and reacted to new ideas and adapted variations of them in their classroom. At this time, the Project was restricted to teachers and students at the intermediate level (grades four, five, and six) who volunteered to participate in the Project; by the end of Year Two, teachers had explored several projects across two years, developed particular interests, cultivated attitudes of genuine curiosity, and acquired considerable independence. In Year Three, the Project has expanded to include volunteer teachers at other grade levels at Metcalf School. Throughout this time period, the advisory team has included four CSR staff members, the school Principal, the Director of the Laboratory Schools at ISU, and staff from ISU's College of Education. What follows is a more detailed description of the activities which were pursued each year.

Year One

The first semester of Year One was put aside for planning. While we had defined the goals of the project, we had not determined how they might be achieved. Our first problem was to specify a process for change that we and the teachers at Metcalf

could pursue. Next, we had to define the framework within which change could be pursued.

Our goal was to have teachers ask themselves what they want to teach, how they want to teach, and how they might judge their own effectiveness. This meant that teachers had to develop the confidence, willingness, and also the knowledge to explore pedagogical alternatives and to evaluate their relative effectiveness. To describe this view of teaching, we began to use the phrase "teaching as a continuing experiment."

In the Fall of 1982 we invited teachers of the Metcalf School to join the Project. At the outset, the invitation for voluntary participation was extended to all six teachers at grades four, five, and six. We hoped to expand participation in subsequent phases of the Project so that eventually all grade levels (K-8) would be represented.

In our discussions with this first group of six teachers, we described our plan and stressed that while we would be discussing specific instructional strategies in reading and in writing, our goal was not to have them adopt these strategies, replacing current ones. Rather, we hoped to explore with them the process that teachers engage in while they examine pedagogical alternatives. They themselves, their thinking and their practice, would be under observation. Specifically, the observation would involve interviews, questionnaires, and video-taping of on-going instruction at regular intervals.

Rich Schuler, then the Director of the Laboratory schools and Acting Principal of Metcalf School, actively supported the Project by relieving participating teachers of some of their routine committee work, and providing a substitute teacher so that teachers could meet with Project staff during the school day at regularly scheduled times. After deliberating for a period of time, five of the six teachers (Wanda Bradford, Mary Kay Fairfield, Rita Fisher, Mary Rozum, Charlene Behrends) agreed to participate in the Project.

After a series of meetings with the teachers in the fall of 1982, the Project began formally in January of 1983. For two weeks we conducted interviews with teachers, administered questionnaires, and made video-tapes of one reading lesson and one content area lesson (science or social studies) for each teacher. At the conclusion of this two-week period (which we called the baseline data collection period), we embarked on the Project proper.

Each month for a period of three months the group (teachers, ISU, and CSR staff) studied one of three topics: background knowledge, reading and writing relationships, and the role of discussion in reading classrooms. The choice of these three topics arose for a number of reasons. Background knowledge was selected since it is area for which there is a great deal of research support and obvious classroom applications. Reading-writing relationships and discussion were identified as important

areas upon which to focus despite a dearth of research in these areas. Furthermore there was an obvious interest among teachers in both topics.

Usually there was one group meeting each week. Throughout the course of approximately a month we repeated the following cycle of activities:

Week 1: An overview of the topic presented by researchers.

Week 2: The group considered the possible classroom implications stemming from the overview, readings dealing with the topic and observations of their own videotapes. They generated questions and guidelines (called focus sheets) to help focus their thinking.

Week 3: Advisory sessions were held wherein each teacher met with one of the researchers who acted as an advisor. Each of the five teachers decided on a particular question to explore. These meetings were followed by a group meeting during which teachers and advisors shared their plans for a trial run. (The advisors were Avon Crismore, Margaret Gallagher, David Pearson, Rob Tierney, and David Tucker.)

Week 4: Advisory sessions were held to review what had happened during the "trial run" and to discuss adjustments or modifications to the original plan.

Brief meetings of the entire group were convened to allow the pairs to present their progress to date.

Week 5: At the completion of the cycle for each topic, the entire group convened to share reactions, observations, and preliminary findings, and to identify unresolved issues and new questions that had emerged from the experience of trying to apply a research idea in a classroom setting. Before beginning the next topic, each advisor/teacher pair wrote a summary report of their project. Then new advisor-teacher pairings formed for the next topic.

To illustrate more fully what teachers did during this initial phase of the Project, we include some examples of material developed during this period. In Figure 1, the focus sheets listing the guidelines generated by the group are in response to our presentation of Background Knowledge are presented. In Figure 2, the guidelines for Topic 2 Reading and Writing Relationships are given. The guidelines for Discussion are too extensive for inclusion here.

Insert Figure 1 and 2 about here.

Throughout the semester, teachers generated the equivalent of 15 mini-research projects ranging from the effects of different modes of discussion upon pupil involvement and the

quality of their arguments to the effects of visualization experiences upon the reading of selected students in the low reading group. To give you a clearer picture of these mini-tryouts or research studies, we describe, in some detail, two projects initiated in the fourth grade classrooms of Charlene and Wanda.

Charlene Behrends decided to focus on the topic of background knowledge. After doing an indepth analysis of a videotape of her teaching, Charlene questioned whether she was introducing so many concepts prior to reading a selection that the net result was a superficial treatment of these concepts. The students did not seem to be very absorbed in what they read nor were they able to proceed independently. As a result of her analysis, Charlene set two objectives for herself: First, to get the students more involved with different text selections and topics she would help them generate and use their own ideas en route to completing a map of their prior knowledge of the topic. Second, to integrate old and new information she would more deliberately provide students with directives and questions to ensure that they relate what knew about the topic to the selection itself. Furthermore, rather than deal with so many concepts, she would select a few and tie them together. In the second week, an excerpt from Charlotte's Web about loneliness was the story in the basal reader. Charlene led the reading group in a discussion of loneliness, having them make predictions about

what the story could be about. Then, she moved to making a list of animals on a farm and how they would be different as pets than as a farm animals. This led to a discussion of feelings of loneliness that their pets might have, and how friendship combats loneliness. In analyzing the tape of the second lesson, Charlene noted that the lesson appeared to tie together better, that the children were more engaged in it, and seemed better able to read independently.

Charlene kept two questions in mind as she presented and evaluated further lessons: (1) Am I affording students opportunities to research what they know about a topic? (2) How am I helping students assume the role of expert?

There upon, Charlene completed the last two weeks by transferring what she had learned about the role of background knowledge not only to lessons in other reading groups, but also to social studies. As a result of the month's work, two main changes occurred in Charlene's teaching. The expert notion was developed by having students generate lists about what they knew about a topic before they read. Second, Charlene dealt with fewer concepts, but dealt with them in greater depth. All this month's work was to serve as an important foundation for further classroom instructional research that Charlene initiated in Year Two.

Wanda Bradford was in her first year of teaching and had been assigned to a fourth grade self-contained classroom. Prior

to our discussion of reading-writing relationships, Wanda's students did very little writing. In fact, she doubted whether the students were capable of doing very much writing. With this in mind, she approached the topic of reading-writing relationships with two questions: To what extent were students capable of generating extended written responses to a topic they were reading in social studies? What influence might planning have upon student writing? The first question stemmed from our discussion of reading-writing relationships and her assumption that students lacked the skills needed to write. The second question was an extension of her interest in the role of planning and background knowledge. The following steps describe what she did to explore these two questions.

1. After having read and discussed a section in the social studies text (Johnny Begai in the Arizona desert), students were asked to portray and to interview characters in the chapter. One half of the class was instructed to conduct an interview and to portray a character, without any previous planning. The other half was allowed time to plan their interview questions and read about the character which they were to portray. While Group 1 was interviewing each other, Group 2 was planning and preparing for their character interviews.

2. The next day, students in Group 1, who had not used pre-planning, were asked to write up their interview in a summary, story form. Students in Group 2, who planned for their interview, proceeded to conduct interviews with each other. A brief discussion took place on differences which had occurred between the groups and as a result a list of advantages to planning was generated.
3. On Day 3, Group 1 students were given a chance to revise their summary. Group 2 students were asked to write about their interviews. Both groups were told to make their summaries as interesting as they could.
4. The entire class was divided into four different groups according to whom they had interviewed. In the groups students presented their interviews (summary) to each other and selected a representative to the whole class. The whole class presentation was conducted as if the people were being interviewed on television. After these presentations, the students discussed the interviews and how planning contributed to their interviews.

The outcome of Wanda's project answered some questions and suggested others. First and foremost, she discovered that her students were more capable writers than she had presupposed. She realized that she had underestimated their capabilities. Second,

she found that writing was a useful vehicle for extending reading activities and as a follow-up to reading social studies material. Third, she came to recognize, together with her pupils, that planning made a significant contribution to how efficient and successful these students were as writers and interviewers. An independent rating of the stories suggested that the essays produced by the students who planned were better, when judged holistically, than those produced by the other students. A fourth finding took Wanda by surprise and resulted in her asking several questions about revision. Specifically, when the revisions were examined it was obvious that they were not an improvement over the first draft. Wanda wanted to explore this issue further and actually took up this topic in Year Two.

By June 1983 we could see change had begun to occur. All of us (teachers and researchers alike) were asking a lot more questions about reading, writing, teaching, learning, and change than when we began the project. In terms of our goals for the teachers, we felt that the teachers were on the way to becoming objective observers of their own teaching. Furthermore, the instructional initiatives which teachers had explored crept into their teaching at other times during the school day.

For us, the process of working collaboratively with teachers to help them think about instructional problems and goals was radically different from our usual experience of delivering a prepackaged set of instructions for carrying out instructional

procedures. What a departure for us who were accustomed to talking briefly with groups of teachers, offering some suggestions, describing some practices that had been successful in other settings and then, leaving. Just as the teachers' practices were being subjected to close scrutiny and change, so too were many of our ideas about change, effective instructional procedures, and ways to communicate those ideas.

Year Two

At the close of the school year, the administration of Metcalf School changed. A new Director, Dennis Kelly, was appointed and a search got underway for a permanent Principal. Dennis Kelly continued to extend the same degree of support as his predecessor, Rich Schuler, and was welcomed as a new member of the Project group as was Al Jurenas, who was selected as the Principal of Metcalf School.

With all parties feeling secure about the future of the Project, Year Two preparations began in the summer. For three days the Project group met to evaluate the first year of the Project and to plan for the second year. The first order of business during these meetings was to discuss what had occurred in Year One and what changes should be made in Year Two. Decisions ranged from what topics should be the focus of Year Two to the suggestion of changes in the organizational framework for achieving the goals of the project.

An important feature of this meeting was the sense of community which emerged with the continuation of the project and with teachers assuming more responsibility for the project. This sense of community was heralded by what may seem, on first glance, a trivial development. The teachers chose to change the title of the researchers from advisors to partners. As Year Two began, we knew that teachers had to become integrally involved in all aspects of the project as decision-makers. If this project was to endure beyond the researchers' stay in the school, teacher control had to be established. During Year One we felt as if most decisions were being made by the researchers. Indeed, there was a tendency for the teachers to expect us to make decisions for them. In Year Two, everybody in the project was involved as decision-makers.

Another major change from Year One to Year Two was in the framework within which projects were carried out. In Year One we explored three topic areas and changed the teacher-researcher pairing for each topic; in Year Two, each teacher chose to explore a single topic area in depth over the course of the year. In addition, each teacher worked with the same partner, or rather the same team, for the duration of the year. Furthermore, unlike Year One, teachers would not receive released time. Also, the advisory team for Year Two changed slightly. It included Harriet Arkley, Avon Crismore, David Pearson, Ileana Seda-Santana, Robert Tierney, and David Tucker.

Consistent with the goals of the project, we adopted a problem-solving framework that we used for all the projects in Year Two. This involved the following steps:

1. Selecting the general area of interest: Each teacher was to determine the general area in which she wished to concentrate her energies. Given the commonalities across the teachers, two subgroups were formed: (a) background knowledge and discussion, (b) reading/writing relationships. Within each team there were pairs of teacher-researcher collaborators.

2. Defining the problem: Each teacher was expected to observe her own teaching using videotapes (if necessary), to observe her students' performance, and to think about what goals might be set for their students. At the same time the teachers had the researchers provide some input on the topic. Using this input, the teachers and partners defined the focus of their projects and shared their objectives with their respective subgroup.

3. Securing baseline data and planning projects: In conjunction with refining the plans for the project, each teacher, together with her partner, collected some baseline information and discussed the students' abilities. Sometimes we analyzed videotapes either singly, in pairs, or as a team. At other times we examined students' responses to checklists, tests, or day-to-day teaching. Throughout the project this cycle of planning and gathering data was repeated.

4. Implementing the project and securing feedback on progress: Feedback and revision were an integral part of implementation. As plans were generated they were often revised as the need for changes became self-evident. On a weekly basis, each teacher and her partner (or the entire team) discussed what had occurred, viewed videotapes of the lessons which had been given, and discussed implementation. Throughout the course of the project each teacher and her partner examined developments, noted improvements in student performance, and discussed other signs of progress.

5. Sharing the project: At different times during the course of the project, the teachers and their partners shared their projects with their topic team or with the entire Project group. This provided additional opportunities for revision. At the end of the project each teacher and her partner prepared a written report of what had transpired. Sometimes this written report took the form of a journal article for later publication.

The five teachers selected a wide range of topics as foci for their projects. Two teachers selected discussion as their general area of interest. This interest stemmed largely from a desire to explore in greater depth some of the issues they had only touched upon in the previous year. Mary Rozum chose to explore explicit standards and strategies for discussion; Charlene Behrends chose to explore how discussions of background knowledge influenced comprehension and learning in social

studies. Rita Fisher, Mary Kay Fairfield, and Wanda Bradford had developed a keen interest in reading-writing relationships during the previous year. They were concerned about their students' weaknesses in revision and critical reading of their own written work. Wanda directed her energies at the question: Does instruction in sentence and paragraph structure transfer to informative reading and writing? Rita and Mary Kay pursued reading-writing relationships in conjunction with trying to improve the critical reading abilities and revision strategies of their students. We will describe three projects from Year Two in more depth.

Mary Kay Fairfield is a fifth grade teacher who in Year Two wanted to focus upon reading-writing relationships--in particular, how she might integrate these into helping her students learn to revise. During Year One Mary Kay had become aware that she gave her students very little encouragement and opportunity to give their fellow students input or to revise their own work. Some baseline data collected in October suggested that students had a limited sense of revision. To them revision involved correcting spelling and "tidying up" their pages.

As Mary Kay and her partner discussed this problem, certain principles and objectives emerged to guide planning for a project. For example, Mary Kay and her partner determined that it was important for students to understand what revision

entailed, why you do it, and how. They reasoned that the facility with which students could distance themselves from their own work was key to effective revision. Mary Kay speculated that peers might help achieve this distance by reading aloud each other's work and providing each other advice. With these tenets in mind Mary Kay developed the following plan:

Step 1. Students discussed the revisions (presented on an overhead) that E. B. White did when he wrote Charlotte's Web.

Step 2. Students wrote on a topic given by the teacher.

Step 3. Students brainstormed about what was involved in revision in order to define the steps involved. Students discussed reasons for doing revision.

Step 4. As a group, students examined and discussed possible revisions of written work that Mary Kay had saved from previous years.

Step 5. Each student was assigned a peer for input. The peer's job was to offer suggestions to the student for revisions of the composition and to read the students' composition aloud so that the student could hear it from a "distance."

Mary Kay encountered several surprises as she implemented her plan. Initially, she was uncertain of how students would

react to a discussion of E. B. White's revisions and the topic of revision in general. They loved it. Not only did all the students become actively involved, they shared ideas reflecting their knowledge of the difference between revision (of ideas) and editing (for style and mechanics), and they even demonstrated some feeling for how and when each might be pursued. Mary Kay's optimism was short-lived, however. While the children could talk about revision, they had a great deal of difficulty actually changing their own work, even with the support of their peers. Students were reluctant to change their texts, and peers tended to offer general praise rather than offer specific criticisms or suggestions. Mary Kay and her research partner--indeed, the entire research team--were forced to re-examine their own thinking about revision and to modify the project plan.

Over the next three months Mary Kay continued to work with revision and she began to see changes. Not only did students begin to revise, their writing in general began to improve. So, too, did their interactions with their peers. And, much to Mary Kay's surprise and gratification, she noticed some carryover to students' reading comprehension. At the end of the year Mary Kay and her partner prepared an article entitled: Initiating revision in the classroom--frustrations, questions, new insights. To appreciate her problem-solving initiative you should be aware that, in Year One, Mary Kay had preferred that the researchers

("the experts") tell her what to do. In contrast, during Year Two, it was Mary Kay who was the initiator and scientist.

Rita Fisher is a sixth grade teacher who expressed an interest in developing her students' understanding of how authors craft stories and use their conception of "story" as a basis for revising. She had noted, as Mary Kay had, that students had a very limited repertoire of revision strategies. In her discussions with the students she determined that they had no sense of what changes they might make and that they tended to have difficulty focussing their attention on specific problem areas. Rita initiated the following plan:

Step 1. Students discussed the key elements which make up a story (e.g., characters, action, setting, climax, and outcome) and how the quality of these features distinguish good stories from mediocre stories.

Step 2. Students generated a checklist which they would apply to a story they all have just read and which they would all use to rate their own stories.

Step 3. Students selected one story feature (they called it a story part) that they decided needed improvement and grouped themselves with other students who were planning to focus on the same feature. The students read several

published stories and discussed how those authors developed the feature in question.

Step 4. Students then applied these criteria to one of their own stories and revised it, paying particular attention to that same feature.

Rita's hypotheses about the importance of focusing attention and having options were confirmed. The students became authorities on how they might improve certain features of their stories and revised their stories accordingly. Furthermore, there was, as might be expected, considerable carry-over to reading. Students became more active readers. They began to read other stories with an eye to how a writer crafted a story.

Mary Rozum is a fifth grade teacher who expressed an interest in following up some of her work in discussion. She was particularly interested in whether or not students' consciousness of the purposes of discussion could influence their subsequent reading comprehension. Mary designed a project with two specific questions in mind: (1) Will the introduction of activities designed to help students realize the value of discussion result in changes in their perceptions of the role of discussion in learning? (2) If so, will there be any change in the degree of their understanding of the texts that they read?

Before introducing the planned activities Mary developed and administered a questionnaire designed to assess students' current attitudes toward discussion. Student attitudes toward the value

of discussion before reading and after reading both narratives and expository selections are illustrative of the items on the questionnaire. After administering the questionnaire, the students held an open discussion about the value of discussion. During the course of this discussion, students generated a list of the ways in which discussion contributes to learning.

Two subsequent activities concluded the first phase of Mary's project. Students working in groups developed checklists for how to read and discuss a story and steps for reading and discussing an expository selection. Later students used these guidelines when discussing their assigned reading.

To determine whether or not any changes in students' attitude had occurred, Mary re-administered the questionnaire. On the whole, Mary found that students tended to be more positive about the value of discussion. Mary assessed students' independent reading comprehension through short answer tests on two selected passages. Gratifying to Mary was the fact that she could document growth in her students' comprehension as well as an improvement in their attitude toward learning activities.

Apart from these and other mini-research projects, there were other developments which occurred in Year Two. The most time-consuming of these initiatives was the introduction of systematic procedures for monitoring changes in student performance. There was consensus among all of the Project staff--teachers and researchers alike--that the commercially

available standardized tests being used at Metcalf and nation-wide were inadequate for measuring what we wanted to have measured. To collect data which matched the goals of the Project, several instruments were selected from scales which had been developed recently by members of the Project staff for use in other studies. For example, a reading and writing attitude measure as well as reading and writing behavior checklist were taken from a study Tierney and Crismore were working on at the time. Other measures, such as the reading and writing achievement measures, were developed solely for use in the Metcalf Project. At the beginning and end of Year Two students involved in the project were administered the following indices:

1. Reading Comprehension Assessment

Three passages were selected for each student to respond to: a story from a basal, a social studies selection from a content area text, and a science selection from an encyclopedia. Upon reading each selection each student wrote a summary, selected from a list of different possible questions those which he or she deemed the most important, and wrote responses to a prepared set of questions.

2. Writing Assessment

Each student was asked to generate a composition in response to three writing assignments and then for purposes of analyzing student revisions each composition was to be revised. The three writing prompts were: (a) "If I could be anything I wanted to be

. . .," (b) "Describe the Bloomington-Normal area for someone who has never been here," and (c) "Write a story about anything you want to write about."

3. Attitude Measures

Each student responded to parallel reading and writing attitude measures.

4. Behavioral Questionnaires

Each student responded to parallel questionnaires which probed the reading and writing behaviors students use when reading and writing different texts.

In subsequent years these tests will be administered each spring in order to evaluate the long term effects of the project.

Just as these indices afford us the possibility of monitoring student progress systematically, we have also been monitoring teacher change. Our analyses of teacher change involves several indices. Attitudinal changes, teacher initiative, and changes in theoretical perspectives are monitored by: (1) transcripts of structured teacher interviews conducted at the beginning and end of each year of the Project and (2) notes and transcripts of individual and group meetings held at different times during the course of the Project. Changes in the frequency of input from the different parties involved in the Project as well as the nature of their comments, complaints, observations, problem-solving tendencies, are some of the variables we have monitored.

Behavioral changes or instructional practices are being monitored with the aid of our notes, teacher self-report, and detailed analyses of videotapes. Beginning in Year One, teachers were videotaped on a regular basis twice every week, during one reading lesson and one content area lesson. During Year Two, videotaping occurred on a slightly less frequent basis but systematically in terms of a reading lesson and content area lesson. Each videotape session enables us to complete finely-tuned analyses of how teacher-student interactions have changed during the course of the Project and in specific projects. Also they enable us to define the rules of interaction in effect in each classroom. One such analysis has involved what teachers do with background knowledge, including how students' ideas are invited, introduced, and used.

Year Three

In Year One of the Project, teachers were unsure about their reading and writing instruction. They were interested in being told by persons they perceived to be "experts" what was the right way to teach. Basically they were interested in prescription. By the end of Year Two, reading and writing instruction had become a problem-solving experience. The alleged "experts" had become teachers' partners, and together they were students; that is, they were learning what was occurring as well as what might potentially occur in reading and writing classrooms. The teachers had not only become critical consumers of the classroom

relevance of theory and research, they approached teaching as an ongoing experiment. They were more aware of the ramifications of what they were doing, the rationale underlying their choice of activities, and how and why the students might be responding as they were.

As Year Three begins, our goal, for which there is consensus among all members of the Project, is to have the teachers become totally self-initiating. By the end of Year Three the teachers at Metcalf should be able to dispense with the researchers without any loss of the Project's momentum. With this as the goal, the project is embarking upon a new initiative. Each of the teachers who have been involved in the project to date will serve as a research partner to a new recruit. Our objective is to have the present teacher researchers help other teachers become teacher researchers.

In Year Three the partners from Years One and Two will continue working with the present teachers. In addition to exploring new projects, they will be able to help these teachers develop a plan for working with the new recruits.

There are several advantages to this plan. Such a plan extends the project throughout the school and possibly to other schools. It affords a way of extending the collaborations between teachers in the school. Based upon the thesis that independent learning arises when learning transfers to teaching, the teachers involved in the project to date will continue to

grow and change. They are likely to become even more effective teacher researchers. Finally the plan supports school-based initiatives. In future years the teachers and staff at Metcalf will likely assume responsibility for maintaining the project as well as for launching other projects.

Some Reflections on the Project

At a time when pessimism about the quality of teachers and teacher education pervades, it is heartening to be involved in a project which addresses the issue of teacher change head-on. On a weekly basis we touch the pulse of teacher decision-making as it pertains to reading and writing instruction. We get to study first-hand constraints on teacher growth, pupil learning, as well as the possible implications of current thinking about reading and writing. We get to study what it takes to implement curriculum change as well as some of the prerequisites of teacher change. This privilege has not resulted from administrative mandates for change, but with voluntary commitment and collaboration. What we have been given is the privilege of sharing and helping with teacher decision-making. Our problem-solving framework guarantees that we don't abuse that privilege.

The project is not short-term nor is our view of change. Change takes time and while we are optimistic about the end result of the project, we are still embroiled in the difficult task of collecting and analyzing broad-based and long-term indices of change. Yet, we do have some products to show for our

time at Metcalf. We have developed some guidelines and instructional products for teaching reading comprehension and writing, as well as some interesting instructional procedures for observing change in student performance and teacher behavior. In terms of staff development, all participants have expanded their thinking about reading and writing; the teachers have taken advantage of this thinking in their classrooms. In just two years, they have incorporated into their teaching practices a variety of strategies that they have tried out themselves or adopted from each others' projects. Also, the project has been shared with other schools, who in turn are considering similar projects.

What is more important to the project's goals, however, is what we are learning about change using this model. Based upon the Metcalf experience, we are optimistic that we have a useful model for nurturing teacher change as well as translating reading and writing research into practice (and practice back into research). We have learned that models of change must be sensitive to the fact that change is a human endeavor. It requires individual effort, problem-solving, negotiation with self, and a willingness to consider alternatives. We can recall Wanda explaining how radical it was for her to begin to alter her thinking about writing. Composition was an entirely new curriculum area for her because previously she had been teaching only penmanship. Similarly we can recall Charlene's comment in

one of the advisory sessions that "background knowledge was everywhere--in everything." For both Charlene and Wanda, the fundamental novelty of these ideas required a lot of thinking over a long period of time. These ideas were not embraced overnight nor did they become part of their repertoire of thinking and teaching without effort, problem-solving, negotiation, discussion, and grappling with the ideas as ideas and as pedagogical possibilities in an already busy day. Fortunately, the Project capitalized upon the idiosyncratic learning tendencies of individuals as they achieved ownership of such ideas. From our perspective, it was wonderful to be in a situation wherein we could be participant observers of these changes and be part of this problem-solving process. What is important to realize is that the process of change or adopting a problem-solving attitude was more important than any educational products or deliverables. Again, a major force in helping to develop this attitude has been the avoidance of prescription. This entailed more emphasis on the teachers' problem-solving process than on predetermined products, whether it be making decisions about the project overall or an individual teacher's project.

Finally, it probably goes without saying that the success of the Project hinges upon communication. Administrators, researchers, teacher educators are all talking and sharing. Roles may differ on some dimensions, but each has a contribution

with a common thread that we are all teachers, all learners, and all problem-solvers, interested in improving the instruction of reading and writing in the classroom.

Metcalf Comprehension Project

TOPIC 1: Background Knowledge

Activities Suggested, February 1, 1983

1. Researching What Students Know

   a. Pick out key words in a selection: discuss with students how these might be related to something familiar--that students may have read about or seen.

   b. Look at pictures: based on the pictures, make predictions about who the characters will be; what the setting of the story is likely to be, etc.

   c. Draw out during discussion experiences students may have had that would be relevant to the topic.

   d. Use maps to learn more about a location specified in the selection.

   e. Suggest or have available supplementary reading--books or magazines--on related topics.

   f. Select some key words; ask students to free associate; responses may be recorded on board.

   g. Discuss with students a concept or situation you feel will be analogous (for them) to the one they will be reading about.

   h. If possible, some students may serve as experts on particular topics.

   i. If possible, simulate some part of the experience in the selection in the classroom; this will give students some first-hand experience.

   j. Pre-read a selected passage; have students predict what will be forthcoming.

In all of the above activities, the teacher must:

   1. do some sort of analysis of what the knowledge domain required is. What does the child need to know and think about in order to understand?

   2. be concerned with introducing child-centered rather than teacher or text-centered knowledge.

   3. provide more than a "definitional" experience for children; rather, the teacher should be concerned with "relational" ties between old and new information.

2. Mobilizing What Students Know

   a. Ask: "Have you ever felt that way?" invite students to identify with characters.

2. Mobilizing What Students Know (Cont'd)

b. Predict how story will end; ask students what makes them think so.

c. Ask the same question three or four time along the way; if students change their answers, ask them why.

d. Have students generate questions.

e. Ask students to adopt a point of view about something in the story: Perhaps ask one student to adopt one point of view and another the opposite point of view.

f. Have students take a position about what they have read; ask them to justify it.

g. Ask students what they know about a topic.

h. Ask students to recollect something that you consider relevant and that you are sure they know.

i. Get students to visualize something--develop an image--perhaps by drawing a quick sketch.

j. Ask students to make comparisons--to draw analogies between the new information they are encountering and old, more familiar information (e.g., Canada and U.S. states and provinces).

k. Visually display information in chart form on chart paper or on the board.

l. Encourage students to become engaged with the text by asking them to read knowing they will later be asked to perform a skit, or initiate a character or a similar activity.

m. Have students dramatize parts of a selection; ask them to act as tour guides.

3. Seeing What Students Know--Helping Them Be Able to Watch Their Knowledge Grow and Change

a. Help the children see how the pieces fit together and form a whole.

b. Encourage children to bring information they consider relevant to school (maps, books, etc.).

c. After students have free-associated, organize that information on the board for them, or on an overhead projector.

d. Have students compare what they already know (pre-reading knowledge) with the information they have gained from reading their text--perhaps by filling in empty slots on a chart.

e. Ask "experts" in class to prepare a test; others help to evaluate the aptness of the questions for the text that has been read.

Figure 1

Focus Sheets for Background Knowledge

Metcalf Comprehension Project

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   e. Ask "experts" in class to prepare a test; others help to evaluate the aptness of the questions for the text that has been read.

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Figure 2

Focus Sheets for Reading Writing Relationships

I. Are students being given opportunities for rich writing and reading experiences?

Planning

In writing, are you providing time for self-initiated planning?

In reading, are you providing for self-initiated planning?

Aligning

In writing, are you encouraging students to place themselves or immerse themselves in the characters and events they describe? (first person, third person, using dialogue, vivid descriptions)

In reading, are you encouraging students to immerse themselves in characters, events, etc?

Drafting

In writing, are you providing opportunities to talk through ideas? Do rough drafts? Override concern for low-level problems? experiences?

In reading, are you providing opportunities to reread? Jot down ideas? Override low-level problems?

Revise/ Conference

In writing, are students encouraged to share what they have written? To talk about what they are trying to do? How well?

In writing, are students encouraged to revise, edit, and publish?

In reading are students encouraged to share what they have read? Their goals? How well?

In reading, are they encouraged to revise and edit?

II. Are you providing students with writing opportunities during reading?

Are their opportunities for writing
(i) prior to reading?
(ii) during reading?
(iii) after reading?

Are you discussing how writers use what they learn from their reading in their writing? follow up?

III. Are you providing students with reading opportunities during writing?

Are their opportunities for reading
(i) prior to writing (e.g., for researching ideas, learning about techniques)?
(ii) after drafts (e.g., checking for accuracy, richness, techniques, impact)?
(iii) self checking en route to revision?
(iv) for purposes of editing?

Are you discussing how readers might use what they learn from their writing in their reading?

IV. Are you providing students opportunities to talk about how they read and write and to hear other people, including yourself, talk about how you read and write?

V. Are you encouraging students to have full and INDEPENDENT reading and writing experiences?

I. Functional writing opportunities in all subjects for better writing and reading. Suggestions:

II. Helping students plan for writing

Planning involves providing students opportunities to:

RESEARCH	Brainstorm Add facts in mind with genre and context Organize ideas Tap other sources (reference material, interviewing books/people Exploring senses
ADOPTING A STANCE(S) PURPOSE	Narrowly focused or broad--what is my main point (Who, What, Why?)—the significance of it?
ARRANGING	Choosing story teller Ordering events, ideas Highlighting/prioritizing
ANTICIPATING EFFECTS	Scare, amuse, suspend my reader Learning outcomes
SHARING PLANS	Discussing with peer or teacher (intentions)

Checklist for Planning

Are students brainstorming?

Are students generating ideas for all the slots (who, what, where, why)?

Are students adding facts based upon context (audience, publication)?

Are students tapping different resources (books, people)?

Are students exploring what they know about a topic through all their senses (what they see, hear, feel, smell, like)?

Are students clustering ideas?

Are students deciding what ideas are most important?

Are students thinking about the focus (broad, narrow)?

Are students considering order?

Are students considering storyteller?

Are students considering formainess?

Are students considering devices?

Are students considering effect upon reader's thinking and senses?

Are students considering what they are trying to say?

Are students sharing plans?

Are students revising plans?

III. A tentative agenda

Day One:	Writing experience with no planning
Day Two:	Writing experience with planning (10-15 mins.)
Day Three:	Generic Plan for planning (Checklist emerges with class discovery or teachers discuss given plan) Writing experience with planning
Day Four:	Discuss planning

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